

ABSTRACT

An optical CT scanner for small laboratory animals comprises a housing having a vertical through opening through which a test subject is passed through during a scanning session, the housing including a peripheral slot disposed transversely through the perimeter of the opening; a movable horizontal table disposed through the opening, the table being split with a horizontal slot aligned with the peripheral slot; a scanning head rotatable about the opening, the scanning head including a light beam directed toward the peripheral slot, the scanning head including a plurality of collimators directed toward the peripheral slot, the scanning head including a plurality of main photodetectors to detect the light beam after passing through the test subject and the collimators; a perimeter photodetector adapted to provide perimeter data of the test subject during a scanning session; an electrical circuit to amplify and digitize the output from the photodetectors; and a first computer programmed to reconstruct an image of the test subject from the output of the circuit.